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CLINICAL OBSERVATIONS

O N

THE USE OF OPIUM

IN LOW FEVERS,

AND IN THE

SYNOCHUS;

ILLUSTRATED BY CASES.

WITH SOME PREVIOUS REMARKS ON THE

EPIDEMIC FEVER,

WHICH PREVAILED IN 1785 AT OXFORD, AND
IN THE NEIGHBOURING COUNTIES:

IN A LETTER TO

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MDCC LXXXVI.

DENIQUE ut, si quid reipublicæ Medicæ ex opera mea utile
et commodum hac ex parte accederet, forsan recte fecisse
me constaret; nec alii omnino inertem me vixisse viderent;
et, quod fenex ait in comœdia,

Nunquam quisquam ita bene subducta ratione ad vitam fuit,

Quin res, ætas, usus aliquid apportet novi,

Aliquid admoneat, ut illa quæ te scire credas, nescias,

Et quæ tibi putaris prima in experiundo repudies,

illud forsan eveniat nunc; aut alii hinc saltem, hac data via,
felicioribus freti ingeniis, rei rectius gerendæ et melius in-
quirendi occasionem capiant.

HARVEY.

P R E F A C E.

TH E Author of the following pages hopes the intention of their publication will be so obvious, that no apology will be thought necessary. It was judged, that they might be useful, which was with him a sufficient inducement to present them to the public. Whether he has adopted the most proper form may be disputed. Many objections may be made to the tedious narration of the daily occurrences in cases remarkably similar: it may be alledged, that it would have been quite sufficient to have given in a much more concise manner the result of these observations or experiments, as they may be called; but in answer to this, it may be remarked, that the plan, here adopted, is allowed by the highest authority both ancient and modern to be the best calculated for the

improvement of the science and practice of physic. General observations have a transient influence : they are too often forgotten as soon as read, and laid aside, without leaving any trace behind ; but when they are exemplified by a detail, which is as it were a delineation, of particular cases, they are impressed more forcibly and with more permanent effect on the memory. In proof of this position, it may be observed, that though many authors, some of which are particularly alluded to, with the respect due to their merits, in the following tract, have spoken of the efficacy of opium in fevers, yet the use of it has not hitherto made its way into general practice, nor has it been recommended by systematic writers, or introduced into the latest publications on the practice of physic. It is also a great argument in favour of this plan, that the author can adduce the authority of *Lord Bacon*, founded too on the example of *Hippocrates* in its support ; an authority and an example universally looked up to

to, as supreme in every point that relates to the conduct of physical and medical inquiries. Speaking of the causes, which had so long impeded the improvement of medicine, he mentions in the very first place “ *Intermissio diligentiae illius Hippocratis, utilis admodum et accuratae; cui moris erat narrativam componere, casuum circa ægrotos specialium; referendo qualis fuisset morbi natura, qualis medicatio, qualis eventus. Atque hujus rei nactis nobis jam exemplum, tam proprium atque insigne, in eo scilicet viro, qui tanquam Parens artis habitus est; minime opus erit exemplum aliquod forinsecum, ab alienis artibus petere; veluti a prudentia juris consultorum, quibus nihil antiquius, quam illustriores casus et novas decisiones, scriptis mandare; quo melius se ad futuros casus muniant et instruant. Istam proinde Continuationem medicinalium narrationum desiderari video.* *

* Bacon, De Augmentis Scientiarum, Lib. 4. Cap. 2.

Having thus defended the plan, the author would say a few words in favour of the execution, of this little work. He would willingly obviate every exception, which may be taken to his mode of conduct in the particular cases. It may e. g. be asked by his reader, as it has been by some of his friends, why he did not more frequently administer emetics, or why he never used the saline draught in a state of effervescence, as the vehicle for the administration of the opiate? The reasons for the neglect of these and many other remedies were very various. In some the urgency of the case, and the necessity of doing what could be done, in the most expeditious manner, compelled him to give the opiate directly and in the easiest way. Those, who have been much employed in practice amongst the poor will know the difficulties which arise from their incommodious situation, and from the want of proper necessaries and attendance, or what is worse from the ignorance and inability of those who undertake

to

to nurse them. We are very often constrained to do what we can, in preference to what we should choose to do : instead of multiplying applications and remedies we are obliged to simplify them, as much as possible, and to be contented, if we can seize an opportunity of doing any thing. The cases however will shew, that emetics were sometimes administered, and the author has recommended this practice, wherever it can be followed. The effervescing draught is certainly a very good vehicle, and possessing a considerable degree of antiseptic virtue is extremely proper in most cases of fever of this kind. Dr. *Falconer's* experiments however seem to shew, that it is less antiseptic, than that mixture of the same ingredients, from which the air had been permitted to escape*. It

* *Falconer's* Experiments on the antiseptic power of Fixible Air. Page 93.

There is certainly a great degree of antiemetic, antiseptic and refrigerant virtue in the neutral formed by the accurate saturation of the vegetable alkali with fresh expressed lemon-juice ; and it deserves the high encomia, which have been be-

is difficult too to make common people understand or attend to the directions, concerning the mixture of the two ingredients, when we order the draught to be given in the state of effervescence: hence many inconvenient

flowed upon it. But these qualities are not to be expected from any of the substitutes which are sometimes employed in its place. A neutral mixture is frequently made by saturating a large quantity of the alkali with lemon juice at a time when lemons are cheap, which is preserved from putrefaction by the addition of a little vinous spirit, and thus kept for many months. But this mixture thus preserved has not been found to possess the same qualities as when it is recently made: it is so far from being antiemetic, that it is often very nauseous; and it has very little of the expected cooling virtue. It may be supposed, either that the quantity of the spirits employed is insufficient to preserve the vegetable juice from putrefaction; or, if it be sufficient, that it imparts a property, opposite to the cooling sedative effect, which is expected from the medicine. Instead of lemon-juice a dilute spirit of vitriol is sometimes employed; but here the neutral is vitriolated tartar, a salt which is offensive to most stomachs, and is more purgative and less antiseptic, * than the mixture of Riverius. A solution of diuretic salt is sometimes substituted for it: but this is by no means antiemetic, and is also both more purgative and less antiseptic, § than the true saline mixture. On these accounts the fresh lemon-juice should always be employed in making this mixture, whether the draught be given in the state of effervescence or not; for no substitute hitherto proposed has been found to produce the same good effects.

* *Pringle*, Experiment vi.

§ *Ibid*.

mistakes have arisen. And with respect to the present subject, in answer to all that can be alledged in this mode of objection, it may be said, that, if in most of the cases, here adduced, such assistant aids had been employed, much of the good success might have been attributed to these. At present the cases stand perfectly clear and distinct evidences of the effect of the mode of treatment which was adopted. It may be observed, however, that the author is now fully sensible, that in general the quantity of the Tinct. Theb. prescribed, was too small ; and he has no doubt, that the success would have been in many instances more striking, if a larger dose had been given.

It was once his intention to have extended this little tract into a larger dissertation, and to have entered more fully into the doctrine of epidemic fevers : but the multiplicity of his engagements would not permit it, and hardly allowed him time to prepare this letter

for the press, even in its present form. Such as it is, he hopes the public will receive it with candid indulgence, as the production of one, who has for many years made the relief of the lower class of people the constant object of his labour and attention. He hopes this little work will tend to promote that desired end ; and even if it should appear unworthy of patronage, that it will at least, from a consideration of the motive which suggested it, be examined without severity, and rejected without contumely.

P R E F A C E

T O T H E

S E C O N D E D I T I O N.

SO early a call for a new Edition of this tract is a satisfactory proof to the author, that it has been favourably received by the public ; and it is with pleasure he seizes this opportunity of informing his readers, that, since the first publication, he has received the most ample confirmation of the efficacy of the practice here recommended, not only in cases which came under his own care, but also from numerous correspondents in very various and distant parts of the kingdom. But he will not attempt to bias or to preju-

dice his readers judgment, by adducing these testimonies, however flattering they may be to himself: nor is it his intention to enlarge this pamphlet, or encrease the expence of it, by a repeated detail of cases, which would be so nearly similar to those at first described. Yet he has received from one Gentleman, whose correspondence he highly values, and of whose abilities he entertains the highest opinion, a description of a case which points out so strongly some necessary cautions respecting the vehicle in which opium should be administered, and the medicines with which it may be combined, that he apprehends the communication of it will be no less instructive to his readers than it has been to himself. The Author having mentioned in pag. v. of the former preface some doubts concerning the propriety of administering the opiate in the effervescent saline draught, his correspondent is led by that observation to describe the following case, which is here given almost in his own words.

“ An

“ An Apothecary’s apprentice gave, by
 “ mistake, twelve grains of opium, mixed
 “ with a few grains of Pulv. e Ch. Canc.
 “ Compos. for a dose. He discovered his er-
 “ ror about half an hour after, and communi-
 “ cated it very properly to his master, who
 “ immediately gave ten grains of white vi-
 “ triol, without any effect. He then order-
 “ ed two or three ounces of vinegar to be
 “ taken and repeated. He consulted me what
 “ he should do farther, about an hour after
 “ the vitriol had been swallowed. I told
 “ him, I thought his dose of vitriol had been
 “ too small, that it should not have been less
 “ than half a dram, but that it was then too
 “ late for emetics, because, if vomiting could
 “ be excited, probably but little of the opi-
 “ um would be discharged, and therefore I
 “ thought he should attempt to counteract its
 “ operation by the use of acids, and the more
 “ he could get down the better. He prevailed
 “ on his patient to take near a pint of vine-
 “ gar. His pulse was at that time, he said,

“ very

“ very quick, weak and fluttering. About two
 “ hours afterwards he found him worse, but
 “ still without any great degree of sleepiness.
 “ I then advised ten grains of tartar emetic,
 “ which, without inducing vomiting, brought
 “ on, probably by the assistance of the vine-
 “ gar and the opium, a pretty copious pers-
 “ piration. His pulse improved. Five grains
 “ were given afterwards, and three after that,
 “ which operated briskly by vomiting, but
 “ no opium was thrown up. He sweated
 “ plentifully, and gradually recovered. His
 “ pulse the next day, the apothecary said,
 “ was as good as before he took the opium :
 “ but during the whole time he spoke sharp-
 “ ly, and, although his replies were perti-
 “ nent, yet they were uttered in the manner
 “ of an insane person. He made no urine,
 “ and had no stool, till assisted by clyster.”

That vinegar has a singular efficacy in
 opposing the influence of several causes,
 which operate strongly on the nervous system,
 may

may be inferred from what is so well known, that it is often more serviceable in faintings, hysteric paroxysms, &c. than the more pungent volatile salts; and more particularly from the fact so often cited from Boerhaave, that it resists strongly the inebriating quality of spirituous liquors. This case affords a new instance of its opposition to the sedative power of opium; and from hence, as the ingenious writer above quoted observes, it perhaps may be inferred, that even the effervescing draught is never the most proper vehicle for administering an opiate. Whether this inference be admitted or not, it appears from hence indisputably clear, that acids and acidulated liquors are improper, when we wish for the anodyne and composing operation of opium. We learn farther also from this example, that in those instances, where too large a quantity of opium has been either accidentally or by design conveyed into the stomach, tartar emetic is preferable to white vitriol, and many other substances usually directed,

rected,

rected; because, if it does not immediately provoke the discharge of the opium from the body, it co-operates with it in producing a profuse diaphoresis, by which its narcotic effect is in no inconsiderable degree counteracted.

Oxford, Dec. 18. 1786.

A

L E T T E R, &c.

MY DEAR FRIEND,

I SENT you last November a concise account of the Epidemic Fever, which had lately prevailed in this town and its environs; and gave you also a general outline of that mode of treatment, which then appeared to me most effectual in obviating its malignant tendency. My ideas on that subject have been, since that time, so much improved, that I think myself bound to give you an account of the observations, which have presented themselves to me concerning it; not solely because I communicated the former description to you, but principally, because I expect from your judgment and abilities fair and impartial criticism. I rely with confidence on the candour and integrity

B of

of your friendship, which I have experienced through the whole course of my medical pursuits; for I can say with the strictest truth, “ Quoad longissime potest mens mea
 “ respicere spatium præteriti temporis, et
 “ pueritiæ memoriam recordari ultimam,
 “ inde usque repetens, Te video mihi prin-
 “ cipem, et ad suscipiendam et ad ingredi-
 “ endam rationem horum studiorum exti-
 “ tisse.”*

Inform me therefore in your answer, with your usual freedom and candour, whether you think these facts deserving of the attention of the faculty; and suggest to me any mode, by which I can make them most serviceable to the public.

I believe I mentioned in my former letter, that the epidemic fever (as far as it presented itself to our observation) had much analogy with *The slow nervous Fever* of Huxham, so excellently described in his 7th Chapter of the Essay on Fevers. †

* Cicero pro Archia Poeta.

† Though the epidemic Fever assumed so mild a form in this place and neighbourhood (comparatively speaking) yet I think there can be little doubt, that it derived its origin from the same source, as the more virulent and fatal forms, which prevailed in some of the preceding years in most of the neigh-

It came on in general with listlessness, transient chilliness and shivering, succeeded by

neighbouring Counties ; particularly at Gloucester, Worcester, Marlborough, and Aylesbury. In the three former places the remembrance of its ravages is still fresh in every mind, where its virulence proved so peculiarly fatal to the medical world, and deprived the afflicted of that assistance, to which they had been so long accustomed to look up in distress. At Aylesbury, the Gentleman, who so successfully exerted his abilities during the prevalence of the contagion, happily survived to give the public a description of this fever. See an excellent Account of the Contagious Fever at Aylesbury by Dr. Kennedy, 1785.—It will be obvious to any one, who shall peruse that treatise, and compare it with the sketch I have given, that the two disorders were very nearly allied ; and though they differed in some symptoms, their difference was rather in degree than in essential character.—He deduces the origin of the epidemic from a contagion generated in the county-gaol. And from numerous observations relative to this Subject, it appeared to me long ago so probable that this fever, where ever it occurs, has its origin from some similar source ; that I made this supposition the foundation of an address to the magistrates of this county to inculcate the necessity of a reform of our places of confinement from the hope of exterminating in some measure the very source of contagious fever. I should do injustice to the active spirit of the magistrates, if I concluded this note without observing, that my application had no share in suggesting those improvements of our prisons, which have been undertaken and are already so far advanced. The necessity of these had been previously discovered by their vigilant examination of these abodes of misery ; and their zeal, co-operating with their humanity, had excited them to use all possible efforts for their improvement. They had anticipated every thing I could have suggested, though their plan at the time of my address was totally unknown to me.

irregular heat, loathing of food, nausea, sometimes bilious vomiting; dejection of spirits; wildness and unsteadiness in the countenance, haste and precipitancy in the common actions, weakness and tremor of the hands, and general muscular debility; anxiety, agitation, moaning; pains of the back and limbs, as if from fatigue; a dull pain, sometimes more acute, of the head; redness and watering of the eyes; the tongue white at first, not equally but in streaks; the urine commonly high-coloured, loaded, muddy, but not subsiding, though in some instances it deposited a matter resembling mucus tinged with bile; and in a few cases, where the head was remarkably affected, the urine was almost limpid. The body was commonly bound; and the pulse exceedingly quick, seldom less than 130, and generally very feeble.—This might be called the first stage of the disorder.

In the second, all these alarming symptoms were aggravated. The heat was more intense; the eyes were more suffused with blood; the tongue became brown; the pains indeed were diminished, but they were diminished by insensibility: a low stupid delirium
super-

supervened, unattended with any real sleep; for though the senses were not awake to their proper service, they were kept in constant agitation by some internal cause of irritation, which deranged the operations of the mind, and prevented sleep. Hence the patient lay sometimes stupid, at other times in a moaning unquiet state, as if in pain: but often, if roused more powerfully, and questioned concerning his situation, he answered to every inquiry, that nothing was the matter with him, and then relapsed into insensibility. In most persons, if the complaint continued any length of time, some eruption appeared on the skin, commonly a slight rash or purple suffusion over the face: in many instances petechiæ, and in not a few, an ulceration, or at least an aphthous affection, of the throat attended. Deafness was a very common symptom in this stage.

The natural progress of the disorder, whether it ended in recovery or in death, was slow and lingering. It afforded commonly in the earlier stages no great foundation for alarm; and in the latter periods it presented no symptoms, which could furnish a well founded hope of a favourable

event. Either the comatose symptoms gained ground, and without any very manifest alteration, that could be marked with precision, the patient sunk into dissolution : or on the other hand, without any distinguished crisis,* he became gradually more calm, collected, sensible ; more free from feverish heat ; and by an imperceptible progression acquired more appetite and strength, till health was perfectly restored.

* This account of the progress, duration, and termination of the disorder may appear to be contradicted by some of the cases hereafter described : But it should be remembered, that those particular cases are not adduced as examples of the epidemic, but are to be considered as the offspring of that fever, partaking in some degree of its nature from the continuance of the influence of the same constitution, which had so long prevailed. In several of these cases, the urine early deposited a sediment, and in many a decided crisis very soon took place : but these changes were obviously the consequence of the use of medicines. The natural course of the disorder accorded with the above description, but it was varied by the assistance of art. And I think it will appear almost demonstrated even by these cases, that although the natural progress of the disorder, whether it ended fatally or favourably, was slow and lingering and without any distinguished crisis ; yet the use of medicines, *e. g.* antimonials with cordials or with opiates in some degree shortened its progress and produced some signs of crisis ; but opiates either alone or with ætherial and volatile remedies in a much more early and remarkable manner brought on those salutary effects.

The

The occasional exciting cause of this disorder was not in every instance easily traced. The communication of contagion is effected by imperceptible effluvia, the sources of which are not always obvious, nor the mode of their conveyance and operation always discernible: but in the present instance we were led by analogy to conclude, that the disorder originated in all cases from contagion, because in many we had evident proofs of its existence and propagation; and in all, the resemblance of the symptoms to those of the fevers peculiar to gaols, hospitals, &c. which are now universally ascribed to contagious miasmata, gave sufficient foundation for such an opinion. (See particularly Dr. *Blane's Account of the Ship fever. Part III. C. 1. of his Observations.*) In most houses, where it once appeared, unless particular care and attention were exerted to prevent its spreading, it affected more than one person, and often the greater part of the family. It prevailed almost solely, and most fatally, in close small unventilated houses; in the parishes and villages, forming the suburbs of larger towns. I have seen in very many instances proofs of the truth of the remark

made by Dr. *John Hunter* *, Dr. *Rush* †, Dr. *Blane* ‡ and others, that the influence of this contagion is sometimes increased in the winter (by the confinement of the effluvia of diseased animal bodies) contrary to the common opinion entertained concerning putrid diseases. I think I could almost say, that by the long confinement and concentration of the effluvia exhaled even from persons in health, I have known a contagious miasma generated: but here I will not speak positively ||. The disorder hardly ap-

* Medical Transact. V. III. p. 345.

† Manchester Memoirs V. II. p. 507.

‡ Observations on the Diseases of Seamen, P. II. C. 1.

|| In the enumeration of the exciting causes of fevers, three have been particularly noticed by authors, Marsh Miasmata, Contagion and Cold. With all these a peculiar debility of the nervous system or the living fibre is generally supposed to co-operate, as a more remote or predisposing cause. Of the three causes assigned above, the influence and operation of the two former are now by incontestable evidence demonstrated; and the genera of fevers, to which they give origin have been pointed out with precision. But Cold, particularly when combined with moisture, which was formerly regarded as the principal cause of fevers, has of late been less attended to; or at most has been considered only as producing in the body a diathesis phlogistica, and therefore only as laying the foundation of inflammatory fevers, whether attended with any topical affection or not. But it is probable, that the operation of Cold is more extensive, and is concerned more or less in the produc-

peared in any family which lived in large apartments well situated and properly ventilated.

production and modification of every febrile complaint. Innumerable facts, well known to those who are conversant in the writings of Messrs *Lind, Blane, Campbell*, and the various authors on the Plague and diseases of hot climates, shew, that Cold is a powerful assistant in the propagation of those disorders, which arise from contagious or marsh effluvia (see particularly the chapter of Dr. *Blane's* Work above referred to). Nay, it appears by many instances, that such effluvia do not produce their noxious effects, except with the concurrence of cold and moisture. Infection is not only generated more readily, but retained more obstinately about the persons of men in cold weather and cold climates, than in contrary circumstances. The true plague, and the worst forms of putrid fever, are disorders almost unknown in the tropical climates. — We may, perhaps, therefore be allowed to form the following conjecture concerning the operation of the several causes in the production of the fevers here alluded to. The contagious or marsh effluvia exhaled from their respective sources are suspended round the place or body which supplied them, like an atmosphere, by a sort of solution in a watery vapour, in the same manner, as we may conjecture concerning the odoriferous particles of plants and flowers.* An animal body immersed in, or exposed more partially to the contact of, this infectious atmosphere, is liable to absorb these noxious particles by the skin, by the lungs, or by the stomach; by one or more of these inlets into the system, and possibly by all of them. If no particular cause of constriction or restraint acts upon the excretory organs, these infectious particles are probably again discharged harmlessly into the air with the excrementitious or useless fluids; but if the excretories become

* See Dr. *Haygarth's* Inquiry how to prevent the Small-Pox, &c. particularly Sect. III. VIII. and IX.

Considerable evacuations either by the lancet or by purgative medicines were almost always prejudicial, sometimes fatal. Some slight symptoms of inflammatory *diathesis* which accompanied the first accession of this fever in some particular instances, induced practitioners of the best judgments to use the lancet ; and I have seen the blood much inflamed. But I do not recollect, that in any

constricted, while these particles are accumulated in the system, they are then allowed time to ferment, and disseminate themselves, to exert their malignant qualities, and convert the fluids of the body into their own nature. Whether the marsh miasmata or the contagious effluvia alone can produce such a constriction on the excretories, is much doubted ; but certainly, in concurrence with cold, either will have this effect, and will give a permanence to the primary and simple operation of cold itself, which is to constrict and obstruct, for a time, the excretory and exhalant vessels. These observations may perhaps be applied to explain—why very hot or very cold climates are not favourable to the propagation of contagious diseases—why these abound in more temperate regions in every various degree of heat to which those regions are subject—why such fevers in their first attack are often accompanied with symptoms of inflammatory diathesis—why so many persons escape the influence of contagions, though we know from their mode of life and employments, they must be constantly exposed to their action—and, lastly, why antiseptics are serviceable in securing the body from the first action of such contagions, or in obviating their effects. These several articles I could extend, each into a distinct dissertation ; but such a discussion may not perhaps be necessary at all, and in this place it would be certainly superfluous.

case

case, any advantage resulted from this practice; and, in many, a fatal debility almost immediately supervened, which no cordials or restoratives could afterwards overcome. Nitrous, and other saline neutrals, were soon found to be injurious. Even antimonials, particularly James's Powder, when given alone, by producing profuse sweats, without any succeeding crisis, any intermission of the febrile symptoms, seemed to augment the debility, and certainly prolonged the disease. The use of Peruvian Bark, cordials, and antiseptics, answered better; that is, more patients recovered than under a contrary method. But the disorder ran on to a great length; three, four or five weeks: and at last, if it ended in health, there was no satisfactory evidence that the recovery was owing to the medicine; it appeared barely to have supported the strength of the patient, and given an opportunity to the *Vis medicatrix naturæ* to exert its salutary power.

The consideration of these facts led my attention to the observations I had so recently heard and read (particularly in Dr. Campbell's Pamphlet on the Fever in Lancashire, 1785; Dr. Blane's Observations, published

lished the same year, and in the different publications of the Pupils of Dr. *Brown*) concerning the efficacy of Opium in fevers of this kind.

The practice therefore, which I was persuaded by these reflections to adopt, cannot be said to be *new* with respect to typhous fevers in general; but may perhaps deserve even more attention from its application (which may be inferred from the successful treatment of some of the cases mentioned hereafter) in another form of fever; that middle genus, which the modern Nosologists have termed *Synochus*.

The *Synochus* partakes both of the inflammatory and typhous symptoms. It is sometimes hastily arranged and treated, as belonging to one or other of these divisions only, and in both modes has been too often treated unsuccessfully.—It is a matter therefore of no small importance to point out its diagnosis more distinctly, in order to lead to a more decisive method of cure.

Of continued fevers, Nosologists have defined three genera: the inflammatory, *Synocha*;

cha; the putrid or malignant, *Typhus*; and a third, *Synochus*; which is described as being “Initio Synocha, progressu et versus finem Typhus.” The two latter genera, if we may be allowed to consider them as distinct, are much the most common in this country. Under particular circumstances the Typhus prevails, in the habitations of poverty and filth, in places of confinement, in prisons, hospitals and ships. It is the offspring of human contagion, and is propagated by the effluvia from diseased human bodies. In its most violent form it is called *Typhus gravior*, in its milder shape, *Typhus mitior*. The true inflammatory fever without any concomitant local affection is a very rare occurrence. The Synochus, which begins with slight inflammatory symptoms, and soon ends in the debility of the Typhus, is perhaps the most common form of continued fever in this country. It appears in most cases to originate, like the Typhus, from contagion: the operation of which is at first disguised and modified by a slight degree of inflammatory diathesis, either previously existing in the system of the individuals attacked by the disease, or induced by the concurrence of certain occasional causes, particularly cold,
co-operat-

co-operating at its accession with contagious effluvia. *

In many of our epidemic fevers we can clearly discern this combination of causes : and it is particularly observable in those fevers, which continue to arise for some time after the violence of an epidemic fever has spent its rage. The following cases will sufficiently illustrate this fact. Few of them occurred during the highest degree of the prevalence, the acme of the epidemic, (which prevailed principally in this place in the spring, summer and autumn of the year 1785,) but arose, as the dates will shew, in some of the succeeding months, when the influence of the contagion was much weakened. They may however be regarded as nearly allied to it ; and may be considered (if I may adopt Dr. *Huxham's* expression †) as *propagines* of the epidemic.

HAVING premised these observations concerning the general constitution of that

* See the remarks concerning the influence of cold in modifying febrile disorders. Note || Page. 8.

† Observ. de Aere. Vol. II. p. 67.

period,

period with which the following cases are connected ; I shall proceed to relate to you the principles upon which my practice in these was conducted, and the success which attended it.

But having already hinted at the reasons which induced me to adopt the use of Opium, I have little here to add ; as the employment of that medicine, and the mode of employing it, constitutes the only novelty in practice which this essay is intended to point out ; I do not presume to say, to recommend.

Several of the characteristic effects of opium on the human system have been so long known, that we cannot but wonder, that the use of it was not more early introduced in the treatment of fevers, unattended with signs of inflammatory disposition. “ Opium non quadrat genio inflammationis,” is an aphorism of a celebrated author : and the doctrine implied in it, though true in the main, has been extended much too far, even in truly inflammatory disorders. But in many fevers, where no inflammatory disposition appears, or at most the very slightest signs of it are present, it has been applied with very pernicious

pernicious influence, not only to the exclusion of this valuable medicine, but to the introduction of the too general use of Antimony, even in cases of debility and putrescence, where its operation is at best precarious, perhaps prejudicial. † Analogy too

• Many authors, particularly Dr. *Blane* and Dr. *Campbell*, have remarked the impropriety of the *long continued* use of antimonials in low fevers, and the salutary effects of opium in the *advanced* stages of such complaints: perhaps the cases hereafter described may shew, that the use of opium is admissible much more early; and that, so used, especially if an emetic be premised to relieve the stomach and primæ viæ from the oppression of accumulated or vitiated bile, it will often greatly shorten the disease. I hope however it will not be hence imagined, that I am prejudiced against the employment of antimony. I know its efficacy in all disorders of an inflammatory type; and its singular use in evacuating bile in remittent and intermittent fevers.—On this account James's Powder and Tartar Emetic have attained a high degree of reputation; and, perhaps, by this mode of operation, they have sometimes produced the best effects in fevers accompanied with singular dejection of mind and apparent muscular debility: but, it is well known, how often such symptoms depend solely on the state of the stomach, and to distinguish this state, and prescribe accordingly, is the proof of true medical sagacity, improved by experience. Every practitioner can add his testimony to the truth of Dr. *James's* assertion in very numerous cases. But the human mind is ever prone to adopt general laws; and hence the efficacy of the celebrated Fever-powder has been supposed to be universal. It is the rash, ill judged and promiscuous use of it in the hands of Empiricism, which pronounces it specific in all fevers, which I condemn. I find an
observation

might have directed us to the use of opium more generally in these fevers, if we had been more watchful to observe and to apply the relations of its successful employment in similar or allied disorders. It has now been long known, that opium has an almost specific effect in calming the agitation of the spirits, in moderating the heat, in abating the quickness of the pulse, relieving pain and headach, inducing calm refreshing sleep, and shortening the paroxysm, when it is given at the accession of the hot fit of an intermittent. The resemblance of its operation to that of wine, so repeatedly demonstrated, point it

observation in *Dr. Mackittrick Adair's Medical Cautions*, which strongly supports my opinion. As it is the assertion of a Veteran in the service, taught by long experience in the art, I shall assume it as my defence. Speaking of Empiricism and Quackery, he says, " Were I to enumerate all the instances
 " within my own knowledge, of the dangerous and fatal ef-
 " fects of a misapplication of the most powerful of these
 " nostrums, the detail would be almost incredible: a few in-
 " stances may suffice. *James's Powder*, though confessedly be-
 " neficial in certain stages of inflammatory diseases, has, not
 " unfrequently, vomited, purged, or sweated to death persons
 " labouring under low, malignant and putrid fevers, who
 " might have been saved by a liberal use of the Bark, Snake-
 " root and Wine." He subjoins a note in illustration of this
 assertion, which, as being rather too personal, though strongly
 corroborative of this doctrine, I chuse to omit. *Medical Cau-*
tions, p. 142.

out as the best substitute for that supreme cordial in those wretched situations of combined poverty and disease, where wine cannot be purchased. You will see that in some cases I gave it in combination with James's Powder; in others with Æther, with Hoffman's Anodyne Liquor, and with Volatiles. —Perhaps it will be sufficiently obvious, without the necessity of directing your attention to this circumstance, that in the first of these combinations the antimonial rather retarded than promoted the good effects of the opiate, by inducing profuse and debilitating perspiration; and that in general those cases ran on to a very considerable length. This observation is contrary to that of Dr. *Blane*; but it is probable there was some particular difference between the two complaints, which cannot be ascertained. Well acquainted with his ability and assiduity, from an early period of our studies, I cannot doubt the accuracy of his remark. Of the cases described in this letter, compare those, where the opiate was combined with the antimonial, with those where the opiate was given without it; and you will be convinced, how much more immediately and evidently the efficacy of the opium appeared in the latter. Perhaps
some-

something should be allowed to the saline and ætherial fluids, with which the opium was administered. This point I will not pretend to determine, but I think the allowance should not be considerable.

C A S E I.

On the eighth of November, 1785, I was called to Mr. *Spacy* in St. Thomas' Parish in this city. He had laboured under a fever, if I recollect right, about a week. As it appeared at first to be inflammatory, he had been blooded. The blood drawn, I was told, was fizy. He had also been purged, and to excess (in consequence of his own imprudence in secretly doubling the prescribed dose of his medicine) but without any abatement of the fever. When I saw him he was stupid, heavy; either muttering to himself, or for a time comatose, but without any real sleep: his tongue brown; his urine high coloured: he made very little complaint: his

pulse was feeble and about 100. I ordered a large blister between the scapulæ, and a draught of Julep. e Camphor. with a few drops of Liq. Anod. Min. Hoff. Vin. Antim. and Elix. Paregor. every sixth hour.

Nov. 10th. Finding that even these weak anodynes had a little quieted his agitation and irregular motions, and rendered him more composed, I directed a draught with xv drops of Tinct. Theb. and about xxv of the Liq. An. Hoffm. to be taken once in six hours. His pulse was nearly as before. A clyster was likewise thrown up to obviate costiveness.

Nov. 11th. The clyster having procured sufficient evacuation, and the urine depositing a good sediment, I took the opportunity to give the decoction of P. Bark every fourth hour, warmed with Julep e Camph. Conf. Damoc. and Tinct. Serp. and about xxv drops of Sp. Vit. dulc. in each dose. A draught of the same kind was given at night with xii drops of Tinct. Theb.

Nov. 13th. His pulse was slower and stronger, but the skin was dry and harsh ;
and

and the imbecillity of his mental faculties as great as ever : I therefore made his medicine more cordial and diaphoretic, and doubled the quantity of the opiate at night.

On the 14th and 15th, I was not able to see him ; but the apothecary, who was a very attentive diligent man, observing that his perspiration was very profuse, omitted the night draught, that we might have an opportunity of seeing whether the sweat was induced by that medicine.

Nov. 16th. The symptoms of debility were much increased by the restlessness, which followed the omission of the opiate. The perspiration was not diminished. I therefore increased the quantity of the Tinct. Theb. and gave the medicine more frequently.

It is not necessary to be more particular, or to give every day's report : it is sufficient to say, that by this treatment, very little varied, the pulse in four or five days became more calm, the sleep more natural, the senses more alive. The opiate and diaphoretic ingredients of the cordial were omitted, as no longer necessary. Aperient medicines, which were

now required, were occasionally used, and the patient by slow degrees recovered his health and strength. But he continued in the whole near four weeks in very considerable danger.

C A S E II.

On the 15th of the same month, I was called to *B. Harris*, servant to Mr. *Rowland*, baker, in the same Parish, who had been indisposed with a fever several days, and had been attended by a judicious apothecary; but as his complaints seemed alarming, his friends were distressed, and desired my assistance. His pulse was extremely quick; his face flushed; his intellects much disordered; his sleep very irregular.

As his disorder was imputed to cold, I first ordered him a vomit and then Pulv. Jacob. ver. gr. iij vel iiij 4ta quaque hora. He had afterwards a blister applied to his back. Being much engaged out of town, I did not see him again for several days: but the same medicine was continued.

Nov.

Nov. 22d. I found his symptoms aggravated, directed the blister to be renewed, and increased the quantity of the Pulv. Jacob. to Gr. v. It was given in a bolus with Conf. Card. Gr. xv. and Ext. Thebaic. Gr. fs. It was administered every sixth hour, and a draught interposed of Julep. e Camph. with Spir. Mind. and Liq. Anod. Hoffm.

Nov. 23d. We appeared to have gained some ground: for, though the state of the intellect, the thirst, and the appetite continued nearly the same, yet the pulse was become more calm and moderate; the skin was more open; there was more disposition to sleep; and the urine let fall a good sediment. I could not but impute, as in the former case, these signs of a crisis to the operation of the opiate; and conceived, that I might with good effect in the same manner seize the opportunity of perfecting the cure by the administration of the Bark. But previously to the exhibition of that medicine, I ordered a blister to be applied to the inside of each leg. The medicines prescribed the preceding day were repeated. A clyster was ordered to be administered in the evening, if it should be required, and an anodyne draught at bed

time, with xv. drops of Tinct. Theb. xx Es-
sent. Antim. and Liq. Anod. Hoffm. xxx.
And unless an exacerbation of the febrile
symptoms should take place before the next
morning, he was then directed to begin the
use of the bark with snakeroot, and to repeat
it every sixth hour.

Every thing succeeded to my wishes. From
this day the young man gradually recovered
his health : but this case, though it was de-
termined by a more decided crisis than the
former, run to a very great length ; the boy
being confined to his bed very little less than
four weeks.

C A S E III.

A Servant Maid of Mr. *Lucas*, Taylor,
in St. Thomas' Parish, of whose case, how-
ever, I have not preserved any full reports,
was afflicted at the same time with the last
patient, with a fever of nearly the same
kind ; attended with a low quick pulse, con-
stant watchfulness, scarlet suffusion over the
face, and flying pains in the head and limbs.
She was treated nearly in the same manner

as

as the young man (Case 2nd), with the same circumstances in the progress and event of the disorder.

C A S E IV.

I was called on the 8th of November, 1785, to a son of Mr. *Hughes*, cooper, in Magd. Parish, about 12 years of age, who had for some days laboured under a fever, with a quick pulse, headach, flying pains all over the body, and want of sleep. As he had undergone some evacuations, I ordered him a saline draught, with Julep. e Camph. Liq. Anod. Min. Hoffm. and Syr. e Mecon. every fourth hour.

In three days I found the symptoms so much mitigated by this treatment, that I ventured to order the Bark: but as he was worse the next day, the febrile symptoms having increased prodigiously, I substituted a Bolus of Conf. Card. with Pulv. Jacob. ver. Gr. iv. and Opii Gr. fs.

After the use of this medicine three days more, the pulse, the urine, the tongue, &c.
gave

gave evident signs of a remission of the disorder. The Bark was again given on the 16th, and from that time his recovery was uninterrupted.

N. B. The above cases are delivered in a very concise manner ; because, as I had no particular view, when I entered them in my journal, the notes relating to them were very short, and barely intended to assist my own memory. In the following, more precision and accuracy will be found, as my attention began to be more particularly directed to this subject by the favourable event of many former trials.

C A S E V.

On the 13th of January, 1786, *Martha Cripps*, a young woman of the parish of St. Martin, became my patient. She had been ill seven days. She was at first attacked with rigor and pains all over her, succeeded by some degree of heat and acute pain in the head, want of sleep, loss of appetite, and extreme dejection of spirits. She had taken, before I saw her, some doses of Rhubarb, and the Bark : but her body had been bound,
till

till it was relieved on the 12th by an active clyster, which had procured two evacuations. Her pulse was extremely feeble and quick, about 120, her tongue white, but not dry. These symptoms were attended with thirst, pain in the head, constant moaning, redness upon the skin, particularly on the hands and arms, with a strong pulsation of the Carotid Arteries. But it was remarkable, that this pulsation appeared much stronger to the sight, than when the finger was applied upon the artery; and the pulse at the wrist, as is remarked above, was very feeble. She perspired profusely, though she was at that time only taking the Bark with the simple Tincture, which was continued that day.

N. B. It should be remarked, that this young woman was servant to a very industrious and reputable tradesman; in whose family a fever of the same kind had raged with great violence. The mistress and four of the children had been afflicted with it, and lay a long time in a state of alarming uncertainty. The eldest son died: the rest recovered by a slow progress, without any manifest crisis.*

* See Case xvi,

Jan. 14th. She complained much of nausea, and disposition to vomit. Her pulse was 130. The redness mentioned the preceding day had assumed the appearance of a rash, particularly about the left shoulder. The tongue white; the urine not high coloured, and deposited a sediment; still thirsty; the body still costive, for she had had no stool since the clyster; headach less, but without any sleep. A grain and a half of Tart. Emet. was directed to be dissolved in six ounces of Infus. Sen. and half an ounce of Tinct. Sen. and one table spoonful to be given every hour, till it operated either by vomit or by stool; and if no evacuation by stool took place before the evening, the clyster was to be repeated, and at night she was to take xv grains of Dover's powder.

Jan. 15th. The mixture operated both by vomit and by stool; and relieved the sickness. Pulse about 120. The rash diminished. Other symptoms nearly as before. She was ordered Pulv. Jacob. gr. v. every eighth hour; and in the intermediate time a draught of Julep. e Camph. with a few drops of Essent. Antim. and Æther Vitriolic; and at night, Tinct. Theb. gutt. xx.

Jan.

Jan. 17th. The dose of the opiate was last night increased to xxx drops ; and the same medicines continued. She was still constantly moaning, and complained much of pain in the back and loins. Thirst rather less, but the tongue was white at the sides, and brown in the middle. Pulse so feeble, it could hardly be felt. Body rather bound. The rash entirely gone. The heat of the body inconsiderable. On these accounts, I thought it necessary to make her draughts more cordial, and therefore added to each a little Confect. Card. and Tinct. Serpent. She took them every eighth hour, the Pulv. Jacob. being interposed as before. She was ordered to take Tinct. Theb. gutt. xl. at night, and to have a clyster, if necessary. Her lower extremities were to be fomented with the common decoction.

Jan. 18th. The pulse more easily felt, but still very feeble and quick, about 120. She had had more sleep than on the preceding night. A slight cough. Eyes suffused with blood and heavy. Tongue as on the preceding day. Made less complaint of the pain in the back and loins. She continued the medicines, the fomentation, &c. The quantity

tity of the Tinct. Theb. was increased to gutt. l. and she had a blister applied between the scapulæ.

Jan. 19th. Pulse more strong and less quick, about 108. Countenance more clear. Eyes less sensible to the light, and not so heavy as on the preceding day. The clyster operated once, but imperfectly. Sleep more continued and more refreshing. The blister rose well. She perspired a little in the night. Did not moan so much, nor appear so much dejected, when she awoke. Tongue more clean. The clyster and medicines were ordered to be repeated.

Jan. 20th. Pulse 116. She had slept well, and seemed to gain strength. Urine like muddy small-beer. Other symptoms as on the day preceding. No alteration was made in the medicines.

Jan. 21st. Pulse 100. She had slept well, and appeared much better. The urine began to separate. Tongue more clean, but the thirst still continued. Body still bound. Examining more particularly, I found, that by some neglect the clyster directed on the 19th
and

and 20th had not been administered. She was ordered immediately a draught of an opening infusion of Sena with Rochelle Salts, &c. and to continue her medicines.

Jan. 22d. The opening infusion had operated but little. I directed therefore, that it should be repeated the next morning, if the state of the body should require it. As she complained of sickness from the Julep. e Camph. I endeavoured to give this medicine, which I judged so efficacious, in another form. I ordered the antimonial powder with the Conf. Damocrat. and Camph. in a bolus every eighth hour; and the saline mixture with Conf. Card. and Spir. Lavend. in a draught in the intermediate time, and continued the Tinct. Theb.

Jan. 23d. Pulse 84. Tongue clean. Skin cool. Urine deposited a considerable sediment. She had a stool the preceding evening, which rendered the opening infusion unnecessary this morning. I took the opportunity of this obvious remission to give the Bark, which I should have begun on the 21st, but for the continuance of the thirst. It was given every fourth hour. She gradually recovered

covered her appetite, strength, and perfect health ; and was dismissed from my care on the 31st.

C A S E VI.

About the same time, a young woman, *Elizabeth Clarke*, servant also to a tradesman in the adjoining parish, was put under my care for a similar fever. The treatment, except as particular anomalous symptoms, such as violent headachs and profuse bilious vomitings, occasionally required, was in all material circumstances the same as in the last case : but her indisposition continued much longer. She had been ill eleven days, when she was put under my care on the 23d of December, 1785 ; and she was not well enough to be discharged, till the middle of February.

Convinced by these trials, and many more, which I have omitted to avoid prolixity as much as I possibly could, of the efficacy of the opiate in these complaints ; and almost
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convinced, that its efficacy had been in these cases, and in many others, which I have not detailed, restrained by the use of the antimonial, I determined when I should have a fair opportunity to give it a trial without the antimonial: and I believe the following cases will be allowed to justify the idea, which I had formed.

C A S E VII.

Mary Heritage, a single woman, aged 24 years, of a neighbouring village, became my patient on the 3d of February, 1786, for a fever under which she had laboured near a fortnight, with symptoms similar to those, described in cases 3, 4 and 6. but by her own account the disorder had had exacerbations, though not distinct paroxysms, every alternate day. With a view to this apparent remission, she was treated with the antimonial powder and Ext. Theb. as the former patients were, attention being at the same time paid to some irregular symptoms, which accompanied the disorder. In three days the febrile symptoms were so much overcome, that I thought I might safely order the Bark on the 6th. On the 7th and 8th the disorder appeared at a stand. The Bark did not seem to produce its usual

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usual good effects, nor did it appear to encrease the febrile symptoms.

Feb. 9th. The febrile symptoms returned. Her pulse became quick, above 100. She complained of chilliness, nausea, headach. Her spirits were extremely dejected. I ordered a few grains of Ipecacuanha to promote a gentle vomiting; and after its operation directed a saline draught, with a few grains of Volatile Alkali, xl drops of Æther, and xx of Tinct. Theb. to be taken at bed time, and repeated after an interval of four hours.

Feb. 10th. She thought herself much better. Her skin was soft and open. Her countenance more clear. Tongue clean; and she had slept very well. As she had had no evacuation by stool, a clyster was ordered; and the other medicines continued.

Feb. 11th. She had had a motion without the clyster; passed a good night: free from heat and thirst; urine pale; pulse soft and feeble, about 90. In this state I thought I might venture, notwithstanding the contraindicating state of the urine, to order the Bark. It was given with Vitriolic Æther, Confect. Card. and Tinct. Serp. three times
in

in the day, and at night with xx drops of Tinct. Theb.

From this time every febrile symptom disappeared.

C A S E VIII.

On the 3d of February also, *Henry Harris*, a labouring man, aged 23, of the Parish of Marston, was put under my care. He had had a fever ten days, which came on with the usual symptoms. When I saw him, his pulse was quick, about 108, and not very feeble. He had a violent pain in the head and stomach. Tongue foul, and rather brown: thirst: no sleep: no appetite: skin hot, with considerable perspiration. He was immediately ordered to take xl drops of Vi-
triotic Æther with Conf. Card. and Sp. of Lavend, in the common saline mixture. A clyster was ordered, if necessary, in the evening: and xxv drops of Tinct. Theb. in the draught above mentioned at the hour of rest.

Feb. 4th. Pulse 88. He had had a good night, the first for more than a week. The pain in his head, &c. was diminished. He perspired, but not so profusely as before;

and had more appetite. Thirst nearly the same, though the tongue was not quite so dry; the urine was high-coloured, with a floating cloud. The clyster was unnecessary as he had a stool without it; and the same circumstance took place without any assistance every day through his illness. He was ordered to continue his medicines.

Feb. 5th. Pulse 80. Other symptoms as on the preceding day. No alteration was made in his medicines.

Feb. 6th. Pulse 76: soft, and not feeble. Head clear, and free from pain. Countenance cheerful. Perspiration rather profuse. Tongue moist, and more clean. Thirst abated, and appetite returning. Urine much loaded, and deposited a good sediment. He was ordered a common Bark draught to be taken every fourth hour; and xx drops of Tinct. Theb. at night.

From this time he continued to recover every day. The opiate was repeated two evenings more, but in a diminished dose. It may deserve remark, that on the day after the opiate was entirely omitted (Feb. 10th), I observed an intermission in the pulse of one stroke

stroke in about 5 or 6. If this had happened, while the opium was employed, it would have been supposed to have arisen from that medicine: but it was not remarked, till the laudanum had been omitted above 30 hours, and never while it was continued. I considered it therefore rather as a symptom of nervous debility, which the cordial virtue of the opium had prevented: and it was again removed when he regained his strength by the continuance of the corroborant plan. I observed afterwards indeed in the course of his recovery, that his system was very irritable and his pulse liable to vary from the slightest causes. Accidental hurry from an unexpected visit, or even sitting too near the fire, has raised it for a time to 110. This irregularity of the pulse detained him longer, than was otherwise necessary under my care. I wished to observe it accurately; but he was allowed to return home perfectly well on the 21st of February.

C A S E IX.

On the 15th of February, 1786, I was called to Mr. *Townshend*, Butcher, in Magdalen parish, who had had a fever about a

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week.

week. I do not recollect what medicines he had used ; but he had been blooded, and his blood was extremely florid and tender. His pulse, when I first saw him was feeble and soft ; not very quick, about 96. He complained much of the headach. His urine was almost of the colour of porter. His spirits much dejected. His tongue dry, brown and trembling. His skin dry and hot, and his sleep much disturbed. As his body was open, I thought it would be losing time to use any evacuations, though I should certainly, if I had had more time, and the circumstances of the patient had been in other respects commodious, have given an emetic. I ordered him a cordial saline mixture with Confect. Card. Tinct. Serpent. and Æther to be taken once in six hours in the day ; and at night with xvi drops of Tinct. Theb.

The medicines gently opened the skin ; procured refreshing sleep ; relieved the pain in the head. The body continued open : the pulse became stronger, and not more quick : the urine lost its deep colour and deposited a good sediment.

On the 19th he began to take the Bark with snakeroot, continuing still the anodyne draught at night: and in less than a week from that day was perfectly recovered.

C A S E X.

Mr. *Cromwell*, Printer, at Mr. Jackson's Office, sent for me about noon on the 14th of March 1786. He had been ill three days. His fever came on with rigor and horror, succeeded by heat. The heat was intense, when I first saw him, attended with acute pain in the head, the loins, and all the limbs; with perpetual watchfulness, a dry skin and a white tongue. His pulse was feeble, und about 120. The body was sufficiently open, probably from the use of a solution of Tart. Emet. of which he had taken once or twice by the directions of a judicious apothecary, who attended him.

A saline draught with a few drops of Sp. Volat. Arom. and Liq. Anod. Min. Hoffm. and xv drops of Tinct. Theb. was immediately administered.

At 8 in the evening, I found his pulse more strong and slower, about 108; his pains much abated; the heat of the body mitigated; the skin more moist: and he had had some sleep. I repeated the draught

Mar. 15th. His pulse was about 100. He had little pain in his limbs: none at all in his head: a slight uneasiness about the region of the stomach. He had slept well, and did not complain of thirst. The medicines were continued, as on the preceding day, only with the addition of a small quantity of Tinct. Stomach.

Mar. 16th. Before he took the draught in the evening, he had had a good deal of pain in the side, which the draught quickly removed; and on this day he had had no pain at all any where. He had slept. His skin was moist. His pulse about 84. His tongue less white. His urine loaded. The medicines were continued.

Mar. 17th. His pulse was at 80. He had had a good night; and his urine let fall a sediment. He was ordered the Bark; at first with a little Rhubarb to obviate costiveness,
which

which was discontinued, when the effect was obtained. No other circumstance occurs to be mentioned respecting the treatment of this disorder. In a very few days he was quite well.

C A S E XI.

Mr. *B*——, a gentleman of the faculty, distinguished by his abilities, industry and diligence, was attacked with febrile symptoms, on the 21st of January, 1786. As he had been obliged to sleep in a cold room, rendered very damp by the melting of the snow, his friends imputed his disorder to the influence of cold only: but with more sagacity, and probably more truth, Mr. *B*—— was disposed to attribute it to contagion; though he allowed that the cold might have co-operated, as an occasional exciting cause.

When I saw him first, about seven in the evening on the 22d of January, I could not but adopt his idea of his situation; especially as I knew that his active and regular attendance in several places, where contagious effluvia constantly abound, exposed him every day to their noxious influence. He com-
plained

plained of violent pain in the head, the loins, and all over the limbs. He had no disposition to sleep. His tongue was dry and white. His skin very hot. His eyes tender and watery. His pulse about 130, and extremely feeble.

As I had formerly had much conversation with this gentleman concerning the use of Opium and Ætherial fluids in fevers, I was not surprized to find him very solicitous to try their efficacy in his own case. From a conviction of the propriety of their use, I ordered him immediately Æther Vitriol. Tinct. Theb. āā gutt. xxx. in a little simple mint water. My attention being much excited and engaged by this case, I saw my patient again about one in the morning; and found him much more composed. He had had a little sleep. His pains were mitigated. His pulse was about 120, and much more strong. His skin less hot, and more open. I gave him myself another draught with Æther gutt xxx. Tinct. Theb. gutt. xx.

Jan. 23. His pulse was reduced to 100. He had slept a good deal, and found himself relieved. His urine deposited a good sediment.

ment. He was ordered during the day, to take a saline draught with *Æther. Sp. Vol. Aromat.* and *Tinct. Serp.* every fourth hour.

In the evening his pulse was reduced to 84, and had every 8th or 9th stroke an intermission. I will not pretend to point out the particular circumstance to which this symptom should be ascribed. Some may impute it to the medicines employed. It was more probably owing to the natural constitution of the patient. (See Case VIII. Report Feb. 6th 1786.) As the body was disposed to be costive an emollient clyster was injected; and after it's operation a draught given with xl drops of *Æther. xxv* of *Tinct. Theb.* and *xv* of *Spir. Vol. Arom.*

Jan. 24th. He had had a very good night. All the febrile symptoms being now removed, and the urine depositing a good sediment, he was ordered the bark four times a day.

On the 26th, he was well enough to walk out, and on the succeeding day began to return to his occupations.

N. B. It will appear by the dates, that this Case occurred before many of those,
which

which are related above : but I have described it last, because it most fully and satisfactorily evinces the efficacy of the practice here inculcated.

Most of the cases, hitherto described, were examples of simple uncombined fevers. But it very frequently happens, that the fever is complicated with some topical affection, by which its genius and true character is confused and disguised. It is of the utmost consequence to develope the real type of the disorder ; and to determine how far the nature and tendency of the concomitant local affection may in any particular instance permit or prohibit the use of opium.

In the following cases such complications took place, by which however I was not prevented from using the opiate, and the success justified the practice.

C A S E XII.

Mr. *Knapp*, Gardiner, in St. Ebbs' parish, sent for me on the 21st of March. He had laboured

labouring under a fever some days, much resembling in its leading symptoms the disorder, which had prevailed so much in his neighbourhood. He had violent pain in his head and all over his limbs, with sickness, a weak quick pulse, about 130, and the other attendant symptoms of the low fever. But with these he had a great degree of catarrhal affection; cough, pain in the thorax, with difficulty of expectoration. It was not easy to determine which path to pursue in this complication of opposite indications: but at last, being directed principally by the type of the prevailing epidemic, I ordered an emetic to be given immediately; and a draught, with a little volatile salt and xxv drops of Tinct. Theb. to be administered late in the evening, after the operation of the emetic.

Mar. 22d. The pains were mitigated. The sickness not quite gone off, though the vomit had operated well. The headach returned whenever he coughed. Skin still dry. Thirst. Pulse as on the day before. Urine loaded and deposited a copious sediment. He was ordered a saline mixture with Hoffm. Anod. Liq. and Spir. Vol. Arom. to be taken
every

every fourth hour, and the anodyne in the evening as directed the preceding day.

Mar. 23d. His pulse was reduced to 100. He had perspired profusely. Cough much the same, with expectoration of thick phlegm. A little pain in the loins and stomach. Thirst. The same mixture was continued, but it was made a little softening and demulcent, with a view to the cough, by the addition of a little spermaceti; and a draught, with Tinct. Theb. xxx drops, was given at night.

On the 24th, being out of town, I did not see him.

Mar. 25th. Pulse 100. Perspiration and cough continued, but with less pain. Costiveness: He had not had a motion for some days. On these accounts he was ordered an opening infusion of Sena with Rochelle Salt, &c. and the anodyne medicine to be repeated after its operation,

On the 26th, being out of town, I could not see him.

Mar. 27th. As no stool had been procured on the preceding day, the anodyne was omitted;

omitted ; and he acknowledged, he had had a much worse night, than he had while he took it. A stronger cathartic mixture was ordered, which, with the assistance of one or two clysters, at length procured a fair passage. The anodyne was again administered at night.

Mar. 28. The febrile symptoms were removed. Pulse 80. A slight difficulty of breathing remained : but the urine let fall a good sediment. Some cathartic pills were prescribed, to be occasionally used to obviate costiveness ; but, I believe, he never wanted them. By following a mild softening regimen, and using demulcent medicines he recovered gradually.

C A S E XIII.

John Haynes, a labouring man of the Parish of St. Thomas, aged 38, was first put under my care on the 6th of April, 1786. He had been afflicted with a fever which had continued about a week, and came on as usual with chilliness, succeeded by heat, but without any sign of remission or intermission.

It

It was attended with a troublesome cough, pain in the head, and thirst. When I first saw him, his pulse was about 130. It might perhaps have been a little hurried at that time, as he had walked from a distant part of the town for my advice. He was ordered a draught similar to that, which has been so often mentioned, with Tinct. Theb. xx drops to be taken in the evening.

Apr. 7th. I found that he had passed a disturbed night: yet his pains were much abated, except when he coughed; and his pulse was 108. His expectoration was difficult: tongue white; and skin dry. He was ordered a simple oily mixture, with a mucilaginous demulcent electuary, and a draught with a few drops of Æther, a few grains of volatile salt and syrup of marshmallows in mint water every sixth hour, and xxv drops of Tinct. Theb. at night.

Apr. 8th. He had had a good night. His cough was much less troublesome. Expectoration easy, though the quantity expectorated was inconsiderable. His urine deposited a copious sediment. His skin was open; thirst abated; belly regular; appetite improved;

proved; and his pulse was soft, and about 92. His medicines were continued.

On the next day, his pulse was at 80; and from that time all his feverish symptoms were removed. The cough still continuing, the same plan was pursued with very little alteration; and on the 15th he was quite well.

In the following case a complication of a very different kind took place. In the order of time it should have been inserted before several of those cases which have been already described; but it was arranged here for reasons similar to those adduced in case 11, on account of its importance.

C A S E XIII.

On the 12th of February, 1786, I was called to Mrs. *Goodyer*, wife of Mr. Goodyer, grocer, in the parish of St. Ebb. She had been ill with a fever near a fortnight, and had been under the care of a gentleman of the faculty, who chose, at that time, to decline any farther attendance. When I saw her, she was in a state extreme debility;
E perfectly

perfectly delirious, and had been so, according to her husband's relation, five days. She had had no sleep all that time. Her face was almost of a scarlet hue. Her eyes wild. Her pulse inconceivably quick and feeble. The heat of the skin intense, though with a tendency to perspiration, which sometimes became profuse but not permanent. She was very deaf, and her speech very inarticulate. This last symptom had been hitherto imputed to debility alone: but perceiving in the sound of her voice something of that inequality and hoarseness, which attends one species of topical affection of the fauces, the glottis, the uvula, and tonsils; * I desired to inspect the throat, and found the whole extent of those parts covered with a foul dark-coloured slough. The tongue was dry, and almost black towards the root. This state of the throat had been almost entirely neglected. A blister had been applied exter-

* “ The breathing then becomes more difficult, with a kind
 “ of rattling noise, as if the patient was suffocating: the
 “ voice is hoarse and hollow, as in venereal affections of the
 “ throat and fauces. This gave occasion to the Spanish term
 “ *Garrotillo*.” Dr. *James Johnstone* junior's Essay on Angina
 Maligna, p. 35. See also the beginning of Dr. *Fothergill*'s
 Essay, and his quotation from the Epistle of *R. Moreau* to *Th.
 Bartholin*.

nally, but no internal application or medicines had been prescribed; nor had the diseased parts been particularly examined.

In this deplorable state, where hardly a ray of hope appeared, I thought myself justified in applying that mode of reasoning and practice, which I had found so successful in several cases of simple fevers; combining it however with that which had hitherto been adopted as the most effectual method of treatment in the Angina Maligna. I prescribed therefore as follows.

R Sal. Absinth. ʒj. Suc. Lim. rec. ʒss. Decoct. Cort. Per. ʒjss. Pulv. Cort. Per. gr. xv. * Conf. Card. gr. x. Æth. Vit. gutt. xl. Tinct. Theb. gutt. xv. Tinct. Cort. Per. Huxh. ʒij.

M. f. h. sumend. statim, et repetend. post 4 horar. intervallum.

* Having entertained some suspicions that upon mixing cordial confection with æther and other volatile fluids of the same kind, some change or decomposition might ensue, I made several experiments with a view to the detection of such a change; but I never could observe the smallest effervescence or commotion. When the mixture was allowed to stand, the absorbent powder of the confection sunk to the bottom of the

She was at the same time directed to use a common detergent gargle.

glafs. As I have mentioned this confection, I cannot neglect this opportunity of offering one or two remarks concerning it. Nearly one third part of it is an absorbent earth, which in many of the intentions to which this medicine is applied must diminish its efficacy, if it does not even give it a pernicious quality. An earth of this kind was some years ago, from theory, conceived to be peculiarly appropriated to obviate or remove the cause of fevers, which were then ascribed to the prevalence of acid acrimony in the constitution. But this theory is now exploded: and modern experiments * have shewn, that no substance is so highly septic as calcareous earth. Therefore it deserves consideration, whether so large a portion of it should be admitted into a composition, which with many practitioners is the principal remedy in those disorders, in which if in any, † a tendency to putrefaction takes place. So large a quantity of absorbent earth may be deemed improper in another view. Acids and acidulated liquors are frequently recommended and found very grateful and efficacious in these disorders. But the administration of an absorbent earth diminishes in some degree the good effects of such acidulated fluids by absorbing a portion of the acid, and substituting a compound salt of doubtful, perhaps, of prejudicial qualities. Without a minute estimation of the quantity of the acid, which may be thus neutralized, it is sufficient to say that any part of it is rendered useless: and therefore, that the earth in the cordial confection tends to render that composition both directly and indirectly septic, or at least diminishes the antiseptic powers of the other ingredients. The proportion of the absorbent earth in the *Confectio Cardiaca* of the Edin-

* *Pringle's Appendix*, Exp. xxiii. *Henry's Experim.* Ch. vi.

† See the doubts expressed in the 10th Chapter of Dr. *Milman's* ingenious Essay on the Scurvy and Putrid Fevers.

Feb. 13th. I found she had slept some hours, and waked perfectly clear in her in-

burgh Dispensatory of 1756, was much less than in ours, and in the two last editions of 1774 and 1783, it has been entirely omitted; probably upon the principles which I have detailed. In this note, I have spoken simply of absorbent or calcareous earths, without discriminating the different species of them, which are used in medicine, as chalk, oyster shells, egg shells, coral, pearl, crabs eyes and crabs claws. They all agree in the property of absorbing acid, and are all septic, but in very different degrees. Experiments seem to shew, that those, which are most septic, absorb also the largest portion of acid. Is it therefore in consequence of the absorption of acid simply, or by the formation of a peculiar compound salt, that the absorbent earths prove septic? perhaps in both ways. That all acids are antiputrescent is indisputable, and therefore the abstraction or destruction of them certainly tends to promote putrefaction, unless the neutral formed has an antiseptic virtue. But this is very rarely the case; for, though all the acids are strongly antiseptic, and the fixt and volatile alkalis but slightly septic, if at all; yet most of the neutrals formed by their union promote putrefaction very considerably, and the few, which are antiseptic, are very slightly so. I do not remember, that any experiments have been made relative to the septic or antiseptic virtue of the salts formed by the combination of the different acids with absorbent earths. I shall extend this note no farther than to observe, that the absorbent earth employed in the *Codectio Cardiaca* is both less septic and less powerful in absorbing acid than any other species, which is introduced into the *Materia Medica*. Yet still it has the same qualities as the rest, though in an inferior degree, and will produce proportionably the same effects. The reader, whose curiosity may be excited by these remarks, will find much satisfaction in reperusing, (for I can suppose no me-

telleets : the pulse rather more slow, and much more steady and distinct ; but the other febrile symptoms nearly the same : the throat more clean. As she was still constantly moaning, I desired she might be allowed Port Wine freely, and continued her medicines.

Feb. 14th. She had had another good night, but all the symptoms were otherwise nearly the same as the day before. She was ordered to take the Bark in a more simple form ;

℞ Decoct. Cort. Per. ʒjss. Pulv. Cort. Per.
Confect. Card. āā gr. x. Tinct. Serp. Virg.
Tinct. Cort. Per. Huxh. āā ʒjss.

M. f. h. sumend. 4ta quaque hora.

dical reader unacquainted with tracts so replete with true philosophic information) the Appendix to Sir J. Pringle's Observations, Dr. Falconer's Experiments on the antiseptic power of Fixible Air, Henry's Experiments and Observations, and the Table of *Langius*, of the quantity of acid absorbed by different earths, in the Introduction to *Lewis's New Dispensatory*.

The effects, which result from the absorption or neutralization of acid in the human body, are much more extensive, than upon a superficial view would be imagined. See a note in Dr. J. Wall's Medical Tracts, published at Oxford in 1780, page 211.

In

In the evening I added to two draughts of the same kind, and to be taken at the same intervals, Tinct. Theb. gutt. xx; after which the draughts without the opiate were to be continued every fourth hour.

Feb. 15th. The same plan was pursued; but the quantity of the Tinct. Theb. was increased in each of the two evening draughts to xxv drops.

Feb. 16th. For the first time, I found her pulse very distinct and reduced to 108, soft and feeble. She had had some sleep, but was much exhausted and enfeebled by a profuse sweat. I ordered therefore a mixture with decoction of Bark, the powder of red Bark, the simple tincture and a little cordial confection every fourth hour. In the evening her pulse was only 104. A clyster was directed, to obviate costiveness, and the draught with only xx drops of Tinct. Theb. to be given twice after it.

Feb. 17th. Contrary to my intention, the draughts were given though the clyster had had no effect. Notwithstanding this,
her

her face was less flushed ; her eyes more chearful, and her pulse less feeble. She had a dose of Rhubarb ; and was directed after its operation, to pursue the plan which had been hitherto prescribed.

After some days, thinking the opiate had produced all the good effects, which could be expected from it, and observing that its operation rather took place in the day time, when it was not required, and excited from its combination with cordials more copious sweats, than were desirable in this state of the disorder, it was omitted. The cordial antiseptic plan, with occasional variations suggested by new and irregular symptoms, was pursued : yet this distressing complaint continued to linger several weeks ; and frequently the symptoms were so aggravated as to create new alarms. I was at last convinced, that there was no chance of her perfect recovery, but by removing her from the influence of the contagion, with which she was constantly surrounded ; the bed and the furniture of the room being very probably saturated with it, and supplying constantly a new *Fomes** of the disorder. She was ordered therefore as

* Cullen's First Lines, LXXXVI.

soon as possible, to change her bed and her room, and to go into the country, that the house might be thoroughly ventilated. It was more than a month from my first visit, before I discontinued my attendance; and I am confident her life was preserved by this vigilant attention.

C A S E XIV.

While *Mrs Goodyer* lay ill, her Husband was likewise attacked, on the 2d of March, with a fever which in its first onset was attended with extreme debility. His pulse was about 120; he had a violent pain of the head, with a confusion of the intellects approaching to delirium; nausea; a white trembling tongue, with loss of sleep and appetite. He was ordered immediately to take an emetic draught, and after its operation xxx drops of *Æther* and xv of *Tinct. Theb.* in a proper vehicle.

Being suddenly called, and detained, out of town, I did not see him again till the 4th. He had found considerable relief from the medicines, but as these had been discontinued
by

by reason of my absence on the third, the fever returned with increased violence. His pulse was 130, and the other symptoms nearly as at my first visit. The emetic was repeated, and a saline draught given after its operation with XL drops of Æther and xxv of Tinct. Theb.

Mar. 5th. The draught was given without the opiate in the day time, and repeated with it in the evening. The same plan was directed to be continued on the sixth.

Mar. 7th. His pulse was still quick, about 120, but much more strong: the tongue was moist, and had recovered its natural colour. But the draughts, he thought, hurried and agitated his nerves, an effect which I have often observed from these medicines, when the body is costive, as was the case in the present instance. He was ordered therefore a saline mixture with Pulv. Rhei to be taken every third hour; and if it should have operated three or four times before midnight, he was then to take the opiate as before, omitting the æther, to which from experience of its effects I was disposed to attribute the agitation above alluded to.

Mar.

Mar. 8th. The Rhubarb had operated very sufficiently: he had had some refreshing sleep after the opiate, and waked without any hurry or confusion: his tongue was clean; his countenance cheerful; his urine not so high coloured as it had been, and let fall a good sediment; and he was free from pain. He was therefore ordered the Bark every fourth hour: he was desired to keep as much out of bed as possible, and to leave his room, and go into the open air, as soon and as often as his strength would permit, for the reasons mentioned above in his wife's case. By this mode of conduct he was in a few days perfectly restored to health.

Though I think these cases will sufficiently demonstrate the efficacy of opium in low fevers of a putrid tendency, and in those denominated Synochi, which are disorders extremely prevalent amongst the poor and lower class of people; yet it must not be imagined from my success in these instances, that I recommend it as an infallible specific, suited to all disorders allied to this genus, and equally efficacious in every stage of their progress.

proctefs. Given after a flight evacuation, procured by an emetic, within the first two or three days of the diforder, it generally mitigates the fymptoms, and procures fo perfect a remiffion, as to allow the adminiftration of the bark with fafety and fuccefs. In later ftages of the diforder, though in thefe it has been moft commonly recommended, its operation is not always fo decifive, efpecially if the body be coftive. Purgings, it is well known, is extremely dangerous in thefe cafes: the mild action of the gentleft aperients is fometimes followed by a degree of debility, which no cordials can remove without the ufe of opium: even the common cordials and antifeptics often operate by the bowels. In thefe refpects therefore opium has two advantages above all other cordials; it is not liable to run off by the bowels, and in cafe of coftivenefs, it will admit of the prudent ufe of aperients, and will regulate their operation. In circumftances of the greateft extremity, where the vital power is almoft extinct, that this, as well as all other medicines, will generally prove inefficacious, it is hardly neceffary to mention, but it may be proper to obferve, that there is in fome conftitutions a peculiar idiofyncrafy, though
not

not so often perhaps as is imagined, which counteracts the sedative virtue of opium; and that in those, instead of allaying irritation, composing the spirits and procuring sleep, it aggravates all these irregularities of the nervous system, induces headach, convulsive spasms, confusion of the intellectual functions, wild, fantastic, frightful dreams and temporary delirium. Happily these peculiarities of constitution, though often apprehended, are not very common, and cannot be unknown either to the person himself, or to those who have attended him in former illnesses, by whose information therefore the administration of opium must in some measure be regulated. And it may be remarked, that a small dose of opium will often, in delicately sensible and nervous habits, produce a degree of hurry and agitation of the spirits, when a larger dose will prove perfectly anodyne and sedative.* A small dose

* Notwithstanding the truth of this general assertion concerning the influence of a peculiar idiosyncrasy in resisting the powers of opium in some cases; yet I think it may be proposed as a query, whether the nature of the disease may not in most instances be expected to alter or correct this peculiarity of constitution; and thus a medicine may be taken with great advantage under these circumstances, which at other times, or in perfect health, may have appeared to produce the symptoms

also will often produce costiveness, while a larger does not at all retard the regular action of the intestines.

symptoms of agitation and hurry above alluded to? The observations, which have been made with respect to wine in these complaints, furnish an example exactly analogous. How many patients, who have not been used to wine, and would in health have been intoxicated with half a pint, have drank immense quantities, without the smallest tendency to inebriation and with the greatest comfort and truly cordial satisfaction, in low fevers? I attended last summer a young woman, servant in the family of a gentleman in Buckinghamshire who laboured under the angina maligna, complicated, as usual, with a putrid fever of the most malignant type. The free use of Port wine was recommended, and it was ordered that a glass should be given, whenever the spirits failed or the pulse began to sink. These directions were superintended and enforced by the apothecary of the family with a degree of resolution and attention, which does great credit to his diligence. The young woman took in this manner several days near four bottles of wine in the twenty four hours, besides now and then no small quantity of brandy, and frequently a draught of a strong cordial with Peruvian Bark. As she recovered, the wine began to offend her stomach and affect her head, and the quantity was gradually reduced, till at last she could hardly bear a glass. She was, when in health, remarkably temperate and abstemious, and had lived long in this very respectable family with the best character. The regard, which her master and mistress entertained for her, induced them the more readily to comply with my request, to allow her as much wine, as the apothecary should judge proper from his observation of the progress of her symptoms, and from the effect of the wine and her cordial medicines. Other authors have adduced similar instances of the effects of the free and advantageous

If it had even been in my power to have asserted in the language of Modern Empiricism, that I had never been unsuccessful in any case, where I had directed this medicine, little credit would have been given to an assertion so improbable. I will candidly acknowledge, that I have often failed. I will describe a few of these cases, and submit to your judgement, whether, in the particular circumstances of those patients, any thing better could have been proposed, and whether this medicine lost any part of its credit by its unsuccessful administration here ?

vantageous use of wine. Dr. Campbell, in particular *, has given a case exactly parallel.

And I think I have also seen proofs, that circumstances of disease will in the same manner render opium salutary and grateful to many persons, (especially if it be given in a larger dose than usual) with whom it will not agree in general. I once prescribed a small dose of laudanum for a lady, who told me that opium never agreed with her or any of her family. Therefore, as she knew that she had taken it, she passed a very restless night. In a day or two, finding a still greater necessity, from the increase of the symptoms to give some anodyne sedative medicine, I prescribed xxv drops of Tinct. Theb. without mentioning it; she slept extremely well, and recovered gradually from that time. Whether this fact will afford an affirmative answer to the question proposed above may be doubted; certainly it is admissible as an assistant to the proof.

* Observations, &c. p. 69.

C A S E XV.

On the 17th of October 1785, I was called to Mr. S——, Apothecary, who had been ill about three days with a fever. His business had exposed him very much to the influence of contagion, as he was much employed amongst the poor, in the suburbs of the town and neighbouring villages, and in the House of Industry. He was attacked in the common way, which has been so often described, but particularly with a violent pain in his head and back. He bled himself largely for these complaints, and took a brisk purge, and in consequence became much worse. I ordered him at first (you will attend to the date of this case) a blister inter scapulas, Pulv. Jacob. with Camphor and Confect. Card. in a bolus every fourth hour, and a draught with Spir. Mind. Julep. e Camph. and Spir. Lavend. He pursued this plan two days without any advantage. On the 19th the antimonial bolus was omitted: and to the draughts were added Pulv. Serp. Tinct. Serp. and Theriaca. In the evening he had a draught with Spir. Vitriol dulcis gutt. xxv. Tinct. Theb. gutt. xx.

On

On the 21st, finding all his symptoms increasing, I desired the assistance of an eminent physician, whose abilities are deservedly respected. We continued the opiate in the evening, giving it in Decoct. Cort. Peruv. with Sp. Vitriol. ten. and Tinct. Cort. Per. simp. A draught of the same kind was given every fourth hour without the opiate.

Oct. 22. As the body was bound, a clyster was ordered, and the same medicines continued, but the opiate only to be used when the clyster had done its duty. It was not taken, and was afterwards omitted, from an apprehension, that it would increase and confirm the costiveness without doing any real service, as we had not yet found any advantage from it.

Oct. 23^d. He was ordered an opening infusion, as the clyster had not operated. The injection of the clyster was again attempted without proper effect. The Bark draughts were continued.

Oct. 24th. Symptoms still the same. He had had no stool and made very little water, none that could be saved. No sleep, but a

F

constant

constant restless moaning delirium. Tongue and gums almost black. He was ordered the Musk-Julep with a double portion of Musk every alternate hour ; and blisters were applied behind the ears.

In the evening to the former symptoms were superadded subfultus tendinum and hic-cough. He had had no discharge by stool or urine. He was ordered an opening Infusion with Tart. Emet. and Tinct. Jalapii, and the lower extremities were fomented.

Oct. 25th. He had had a very restless night, with constant tremor and subfultus tendinum ; no discharge by stool or urine ; profuse perspiration ; constant delirium or stupor. Some medicines were suggested, but unnecessarily, as he could not swallow any thing. He died about 5 o'clock the same evening.

Some days after his death I was informed by the persons who undressed the body, that in the loins, and particularly about the region of the kidneys, there was a very considerable ecchymosis. Upon the mention of this, some of his family recollected, that a little
before

before his illness he had suffered a violent contusion in that part. Is it not possible, that this injury might have had some share in inducing that ischuria and obstinate constipation, which were present almost through the whole indisposition, or are they to be ascribed principally to the affection of the brain ?

C A S E XVI.

On the 9th of December 1785, I was desired by the worthy distressed family (alluded to in case V) to meet in consultation the Physician who attended them. It is unnecessary to enumerate all the symptoms of every individual in that melancholy house. It is sufficient to mention, that under one roof, there were four persons extremely ill with the epidemic fever, the mother, two sons and a daughter. The eldest son and the mother were in imminent danger ; but of these the young man, from the violence of his symptoms, seemed to require the most particular attention. He had been ill near a fortnight ; was perfectly delirious, sometimes raving, at others more calm, but always without

the least sign of intellect or reason. As so little time was apparently remaining to us, I suggested the use of opium ; and the gentleman abovementioned, whose candour is a distinguishing part of his character, acquiesced readily in the necessary experiment. We ordered Tinct. Theb. gutt. xxv in a draught of Julep. e Camph. every sixth hour. He took two doses before our evening visit ; and as it apparently soothed the agitation of his system, and produced a calm, which had been unknown for some time, we were encouraged to repeat it. He took another dose at midnight. And about two or three in the morning, he was attacked with a violent spasm, succeeded by convulsions : the agitation of the nervous system was renewed : after this time he could swallow nothing, and died the evening of the next day. Discouraged by this trial we were unwilling to use the same medicine with the rest of the family, but pursued a cordial antiseptic plan, with bark, camphor, serpentaria, &c. and occasionally employing lenient cathartics. After a very long confinement they all gradually recovered, but without any obvious signs of a crisis.

C A S E XVII.

On the 16th of March, 1786, I was sent for to Mrs. C—, aged 70, residing at a village a few miles from this place. She had had a fever five days, which came on with rigor, succeeded immediately by intense heat. She had at first some difficulty in respiration, and a pain or stitch on the left side, for which she had been bled. The blood drawn was in the first cup very fizy; in the second the crassamentum was florid, soft and tender. When I saw her, her pulse was 130, and very feeble; tongue dry and brown; thirst very great; skin dry and hot; countenance dejected and squalid; and she had had no sleep.

In this situation I hesitated some time, before I could decide, whether the symptoms of inflammatory diathesis should be attended to, opposed, as they were, by the much more positive marks of debility and irritation. The recollection of Mr. *Hewson's* third chapter of his *Inquiry into the Properties of the Blood*, determined my conduct. He there shews, that the appearance of size on the
blood

blood is no certain mark of inflammatory diathesis; that it is influenced by many unknown circumstances; and particularly, that, if the size appear in the first cup and not in the subsequent ones employed in the same bleeding, it shews, that the action of the arterial system is weakened, and the qualities of the blood altered, even during the operation. Upon this consideration, I prescribed a volatile saline draught, with a few drops of Hoffm. anod. liq. and xvi of Tinct. Theb. to be taken at two p. m. and thrice repeated, with an interval of six hours. And the next morning, if the body was bound, a clyster was directed to be used, unless the increase of the symptoms of debility should contraindicate its use.

Mar. 17th. I was informed the next morning by the apothecary, who, with that assiduity for which he is eminently distinguished in his neighbourhood, had continued the greatest part of the night with the patient, that she had rested very comfortably; that the quickness of her pulse was abated to 100; that her skin was cool; her countenance more cheerful; her spirits restored; her thirst gone. The clyster had been administered.

nistered. I directed the same plan to be pursued; and the next morning, if she should be equally free from fever, ordered the Bark to be administered largely. But our hopes were frustrated by the negligence of her attendants and her incommodious situation. In the evening, while she was in a profuse perspiration, and a little restless from the heat, she threw off the cloths; and the door of the room close to the bed being left open, a stream of cold air flowed down the staircase from the roof of the house, directly upon her. She was seized with a rigor, to which immediately succeeded a degree of dejection and debility, which no cordials could remove. Indeed, by the time I was able to see her, no medicines could be administered, and she died early the next morning.

To these instances of an unfavourable event, where opium was employed, I could add other cases, wherein I have given it without any decided effect, if I had not already drawn out my letter to a very unexpected length. I have employed it several times in angina maligna, in consequence of the success related in the account of case XIV, but I have not been able to draw a positive inference concerning

cerning its efficacy in that form of putrid fever. I have given it in one or two desperate cases, and I could not observe, that it either expedited or retarded the fatal event. I have given it in others, where the patients have recovered; but I could not presume to ascribe the recovery to the efficacy of the opium.

But with respect to the low fever, so frequently prevalent amongst the poor, particularly if it be given with the cautions so often alluded to above, in the earlier stages of the complaint, I think I can safely give my testimony both as to its power in curing and in shortening the complaint.

Thus, my good friend, I have communicated at some length, though I hope not with tedious prolixity, my observations on this subject. Your answer will determine my conduct with respect to the publication of them. If you shall think this letter contains any thing sufficiently new or interesting to engage the attention of the faculty; if you shall think it may contribute in any degree to reform or improve the practice of Physic, or may give the smallest hint towards a mode of alleviation of the miseries of that most
useful

useful class of the people, the laborious and industrious Poor, I will commit it to the press : for I have the greatest confidence the public will not disapprove, what you have previously distinguished with your approbation. You may remember how elegantly the learned President of the College of Physicians, in his account of the different reception which inoculation met with in this country and in Germany, has expressed the liberal and candid disposition of the faculty in this kingdom, to receive with courtesy, and to adopt with readiness, every plausible proposal towards an improvement in any branch of the science or practice of medicine, from whatever source it proceeds. “ *Quanto melior apud nos medicinæ fortuna ! Si quid novi certa experientia approbaverit, id grata manu, nec tamen novitatis nimis avidi, accipimus ; nec, in iis, quæ ad usum medendi pertinent, inhonestum aliquod aut erubescendum ducimus, doceri etiam ab indoctissimis.*”*

And now permit me to subscribe myself with the truest affection and regard,

Your ever faithful friend and servant,

OXFORD,
June 20. 1786.

M. WALL.

* *Baker de Affect. Animi, &c. p. 149.*

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